

REMARKS

This is in response to the Office Action dated April 19, 2005, in which claims 1-11, 13-15, 18, 20, 21, 24, and 26-31 were allowed and claims 16, 17, 19, 22, 23, and 41 were rejected under 35 U.S.C. § 102(b) as being anticipated by Thoma et al. (US 5569523). The Examiner had previously indicated allowability of claims 16, 17, 19, 22, and 23, but reconsidered and set forth a new rejection to these claims. With this Amendment, claims 16, 17, 19, 22, and 23 have been canceled and claims 18, 20, 21, 24, 27, and 29-31 have been amended. In reliance on the following remarks, the present application with pending claims 1-11, 13-15, 18, 20, 21, 24, 26-31, and 41 is in condition for allowance, and reconsideration and notice to that effect is respectfully requested.

Claims 16, 17, 19, 22, and 23 are canceled without prejudice. In light of the cancellation, the rejections to claims 16, 17, 19, 22, and 23 should be withdrawn.

Claim 41

In the Office Action, claim 41 was rejected under 35 U.S.C. § 102(b) as being anticipated by Thoma et al. The Office Action asserts that Thoma et al. discloses a magnetic recording medium having a seedlayer and magnetic layer disposed on a substrate wherein the magnetic layer has a c-axis and easy axis tilted at an angle with respect to an axis perpendicular to the substrate. Thoma et al. does not show, suggest, or teach that the magnetic material layer has a columnar structure oriented generally perpendicular to the substrate surface while the c-axis and the easy axis of the magnetic material layer are tilted or that the seedlayer structure acts as a template for epitaxial growth. By contrast, claim 41 requires that the seedlayer structure "acts as a template for epitaxial growth", a limitation necessary to create a magnetic layer having perpendicular columns with a tilted C-axis and a tilted easy axis. This is accomplished by the seedlayer structure creating a template for epitaxial growth of a crystal structure having a tilted C-axis and then depositing the magnetic layer perpendicular to the film plane so that the columns are perpendicular relative to the surface normal but the C-axis is tilted relative to the surface normal. Thoma et al. does not

show, suggest, or teach that the seedlayer structure acts as a template for epitaxial growth of perpendicular columns having a crystal structure with a tilted c-axis.

Furthermore, the c-axis is tilted at a *first* angle with respect to the axis perpendicular to the substrate surface and the easy axis is tilted at a *second* angle with respect to the axis perpendicular to the substrate surface. Claim 41 defines a “magnetic material layer having a C-axis tilted at about a first angle with respect to the axis perpendicular to the substrate surface and having a magnetic easy axis oriented at a second angle with respect to the axis perpendicular to the substrate surface, wherein the magnetic material layer has a columnar structure oriented generally perpendicular to the substrate surface.” As shown in FIG. 5 and described in lines 21-22 on page 15 of the specification, the grain growth of magnetic material layer 68 is oriented generally perpendicular to substrate surface 40. In addition, the C-axis and the easy axis of the present invention are also tilted with respect to the surface normal, as stated in the specification, “The magnetic material layer 28 has a C-axis tilted greater than approximately 10° , preferably approximately tilted 25° to 55° as measured from the surface normal. The magnetic material layer 28 also has uniaxial magnetic anisotropy tilted greater than approximately 25° , preferably approximately tilted 30° to 60° as measured from the surface normal.” (Page 10, lines 8-12). Thoma et al. does not show, suggest, or teach a magnetic material layer having a columnar structure oriented generally perpendicular to the substrate surface with a tilted c-axis and a tilted easy axis. As claim 41 is in condition for allowance, the rejection to claim 41 should be withdrawn and claim 41 allowed.

Amendment of Informalities

Claims 18, 20, and 21 have been amended to include a word inadvertently omitted in the original submission.

Claims 24 and 27 have been amended to include a word inadvertently omitted in the first Amendment submitted on February 28, 2005. Claim 24 has also been amended to correct a lack of antecedent basis for the magnetic easy axis.

Claims 29-31 have been amended to include a phrase inadvertently omitted in the original submission.

Conclusion

In view of the foregoing, pending claims 1-11, 13-15, 18, 20, 21, 24, 26-31, and 41 are in condition for allowance. A notice to that effect is respectfully requested.

Respectfully submitted,

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